

1. (currently amended) A method for generating a screen element, based on a data object, of a component application executing on a wireless device for display on a user interface of the wireless device, the component application including a data component having at least one data field definition and a screen component having at least one screen element definition, the components being defined in a structured definition language, the method comprising the steps of:

selecting the screen component corresponding to the screen element selected for display;

identifying at least one mapping present in the screen component, the mapping for specifying ~~a relationship~~ dynamic relationships between the screen component and the data component as defined by an identifier representing the mapping;

wherein a mapping manager maintains dynamic data integrity and automatically synchronizes changes between the screen component and the corresponding data component and vice versa in a runtime environment;

selecting the data component mapped by the mapping according to the mapping identifier;

obtaining a data object field value corresponding to the data field definition of the mapped data component;

generating a screen element from the screen element definition to include the data object field value according to the format of the data field definition as defined in the mapped data component.

2. (original) The method according to claim 1, wherein a plurality of the data field definitions of the data component is shared between the screen component and the data component as represented by the mapping.

3. (original) The method according to claim 2 further comprising the step of linking the plurality of data field definitions to corresponding ones of the screen element definitions of the screen component as represented by the identifier.

4. (original) The method according to claim 2 further comprising the step of detecting a user event of the user interface related to the screen element.
5. (original) The method according to claim 4 further comprising the step of identifying the mapping in the screen component corresponding to the linked data component of the affected screen element.
6. (original) The method according to claim 5 further comprising the step of updating the data object in a memory using the data field definition of the linked data component.
7. (original) The method according to claim 5 further comprising the step of creating a new one of the data object in a memory using the data field definition of the linked data component.
8. (previously presented) The method according to claim 2, wherein the data object field value is obtained by being passed to the user interface as a parameter.
9. (original) The method according to claim 2, wherein a first screen element definition is mapped by a first one of the identifiers to a first one of the data components and a second screen element definition is mapped by a second one of the identifiers to a second one of the data components different from the first data component.
10. (original) The method according to claim 9, wherein the first screen element definition and the second screen element definition are mapped to the same data component using the first identifier.
11. (original) The method according to claim 2, wherein the structured definition language is XML based.
12. (original) The method according to claim 2, wherein the identifier is a simple primary key.

13. (original) The method according to claim 2, wherein the identifier is a composite key.

14. (original) The method according to claim 2 further comprising the step of receiving an asynchronous communication message by the device via a network coupled to the device, the message including a message data object.

15. (previously presented) The method according to claim 14 further comprising the step of checking the asynchronous communication message for the mapping corresponding to the data component of the application provisioned on the device.

16. (previously presented) The method according to claim 15 further comprising the step of updating the data component in accordance with the message and then reflecting the update in the screen element linked to the data component.

17. (original) The method according to claim 15 further comprising the step of creating the data object corresponding to the message in a memory using the data field definition of the linked data component.

18. (currently amended) A system for generating a screen element, based on a data object, of a component application executing on a wireless device, for display on a user interface of the wireless device, the component application including a data component having at least one data field definition and a screen component having at least one screen element definition, the components being defined in a structured definition language, the system having memory for storing computer readable instructions and a processor configured to executed the instructions, the instructions for providing:

a mapping manager for identifying at least one mapping present in the screen component, the mapping for specifying ~~a relationship~~ dynamic relationships between the screen component and the data component as defined by an identifier representing the mapping, and for selecting the data component mapped by the mapping according to the mapping identifier and wherein the mapping manager maintains dynamic integrity and

automatically synchronizes changes between the screen component and the corresponding data component and vice versa in a runtime environment;

a data manager for obtaining a data object field value corresponding to the data field definition of the mapped data component; and

a presentation manager for generating a screen element from the screen element definition to include the data object field value according to the format of the data field definition as defined in the mapped data component.

19. (original) The system according to claim 18, wherein a plurality of the data field definitions of the data component is shared between the screen component and the data component as represented by the mapping.

20. (original) The system according to claim 19, wherein the plurality of data field definitions are linked to corresponding ones of the screen element definitions of the screen component as represented by the identifier.

21. (previously presented) The system according to claim 19 wherein the presentation manager is further configured for detecting a user event of the user interface related to the screen element.

22. (previously presented) The system according to claim 21 wherein the mapping manager is further configured for identifying the mapping in the screen component corresponding to the linked data component of the related screen element.

23. (previously presented) The system according to claim 22 wherein the data manager is further configured for updating the data object in a memory using the data field definition of the linked data component.

24. (previously presented) The system according to claim 22 wherein the data manager is further configured for creating a new one of the data object in a memory using the data field definition of the linked data component.

25. (previously presented) The system according to claim 19, wherein the data object field value is obtained by being passed to the user interface as a parameter.

26. (original) The system according to claim 19, wherein a first screen element definition is mapped by a first one of the identifiers to a first one of the data components and a second screen element definition is mapped by a second one of the identifiers to a second one of the data components different from the first data component.

27. (original) The system according to claim 26, wherein the first screen element definition and the second screen element definition are mapped to the same data component using the first identifier.

28. (previously presented) The system according to claim 19, wherein the structured definition language is Extensible Markup Language (XML) based.

29. (original) The system according to claim 19, wherein the identifier is a simple primary key.

30. (original) The system according to claim 19, wherein the identifier is a composite key.

31. (original) The system according to claim 19 further comprising a communication manager for receiving an asynchronous communication message by the device via a network coupled to the device, the message including a message data object.

32. (previously presented) The system according to claim 19 wherein the mapping manager is further configured for checking the message for the mapping corresponding to the data component of the application provisioned on the device.

33. (previously presented) The system according to claim 32 wherein the data manager is further configured for updating the data component in accordance with the message and then reflecting the update in the screen element linked to the data component.

34. (previously presented) The system according to claim 32 further comprising the data manager configured for creating the data object corresponding to the message in a memory using the data field definition of the linked data component.

35. (currently amended) A method for generating a data object of a component application executing on a wireless device based on a change in a screen element displayed on a user interface of a wireless device, the component application including a data component having at least one data field definition and a screen component having at least one screen element definition, the components being defined in a structured definition language, the method comprising the steps of:

- selecting the screen component corresponding to the screen element;

- identifying at least one mapping present in the screen component, the mapping for specifying ~~a relationship~~ dynamic relationships between the screen component and the data component;

- wherein a mapping manager maintains dynamic integrity and automatically synchronizes changes between the screen component and the corresponding data component and vice versa in a runtime environment;

- selecting the data component mapped by the mapping;

- obtaining a changed value from the screen element corresponding to the mapped data component;

- assigning the changed value to a data field value of the data object according to the format of the data field definition as defined in the mapped data component.

36. (currently amended) A wireless device for generating a screen element, based on a data object, of a component application executing on the wireless device for display on a user interface of the wireless device, the component application including a data component having at least one data field definition and a screen component having at

least one screen element definition, the components being defined in a structured definition language, the wireless device comprising:

means for selecting the screen component corresponding to the screen element selected for display;

means for identifying at least one mapping present in the screen component, the mapping for specifying ~~a relationship~~ dynamic relationships between the screen component and the data component;

a mapping manager to maintain dynamic integrity and automatically synchronize changes between the screen component and the corresponding data component and vice versa in a runtime environment;

means for selecting the data component mapped by the mapping;

means for obtaining a data object field value corresponding to the data field definition of the mapped data component;

means for generating a screen element from the screen element definition to include the data object field value according to the format of the data field definition as defined in the mapped data component.

37. (cancelled)

38. (currently amended) A computer readable medium comprising instructions for generating a screen element, based on a data object, of a component application executing on a wireless device for display on a user interface of the wireless device, the component application including a data component having at least one data field definition and a screen component having at least one screen element definition, the components being defined in a structured definition language, the instructions, when implemented on a computing device, cause the computing device to implement the steps of:

selecting the screen component corresponding to the screen element selected for display;

identifying at least one mapping present in the screen component, the mapping for specifying ~~a relationship~~ dynamic relationships between the screen component and the data component as defined by an identifier representing the mapping;

maintaining dynamic integrity and automatically synchronizing changes between the screen component and the corresponding data component and vice versa in a runtime environment;

selecting the data component mapped by the mapping according to the mapping identifier;

obtaining a data object field value corresponding to the data field definition of the mapped data component;

generating a screen element from the screen element definition to include the data object field value according to the format of the data field definition as defined in the mapped data component.

39. (previously presented) The method of claim 1 wherein the use of the mapping reduces the amount of instructions to define the screen component or perform screen handling.

40. (previously presented) The method of claim 14 further comprising dynamically defining said data field definition at runtime in response to a format of said message data object received in said message.

41. (previously presented) The system of claim 18 wherein the use of the mapping reduces the amount of instructions to define the screen component or perform screen handling.

42. (previously presented) The system of claim 31 further configured to dynamically define said data field definition at runtime in response to a format of said message data object received in said message.



43. (previously presented) The method of claim 35 wherein the use of the mapping reduces the amount of instructions to define the screen component or perform screen handling.

44. (previously presented) The wireless device of claim 36 wherein the use of the mapping reduces the amount of instructions to define the screen component or perform screen handling.

45. (previously presented) The wireless device of claim 36 wherein a plurality of the data field definitions of the data component is shared between the screen component and the data component as represented by the mapping; and wherein the wireless device further comprises: means for receiving an asynchronous communication message by the device via a network coupled to the device, the message including a message data object and means to dynamically define said data field definition at runtime in response to a format of said message data object received in said message.

46. (previously presented) The computer readable medium of claim 38 wherein the use of the mapping reduces the amount of instructions to define the screen component or perform screen handling.

47. (previously presented) The computer readable medium of claim 38 wherein a plurality of the data field definitions of the data component is shared between the screen component and the data component as represented by the mapping and wherein the instructions further cause the computing device to: receive an asynchronous communication message via a network coupled to the computing device, the message including a message data object and dynamically define said data field definition at runtime in response to a format of said message data object received in said message.